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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,288	12/06/2001	Jun Hatakeyama	KOJIM-440	5098

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MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
2200 CLARENDON BLVD.
SUITE 1400
ARLINGTON, VA 22201

EXAMINER

LEE, SIN J

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 09/10/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

10/003,288

Applicant(s)

HATAKEYAMA ET AL.

Examin r

Sin J Lee

Art Unit

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-- Th MAILING DATE f this communication appears on th cover sheet with th correspondence address --

Period f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4-9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Chapman et al (US 2002/0102405 A1).

Chapman teaches compounds, $\text{HN}(\text{CH}_2\text{CH}_2\text{CN})_2$ and $\text{HN}(\text{CH}_2\text{CN})_2$ (see Table 1 on pg.16), and both of those compounds teach the present amine compound of *formula* (1). For $\text{HN}(\text{CH}_2\text{CH}_2\text{CN})_2$, present R^2 would be a hydrogen atom, present b would be 1, present R^1 would be a straight alkylene group of 2 carbon atoms, and a would be 2. For $\text{HN}(\text{CH}_2\text{CN})_2$, present R^2 would be a hydrogen atom, present b would be 1, present R^1 would be a straight alkylene group of 1 carbon atom, and a would be 2.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Stewart (Chem. Abstract 1980:426787 – abstract for Some ester derivatives of 2-methylalanine as intermediates in peptide synthesis, Australian Journal of Chemistry, 33(1), pg.121-9).

Stewart teaches (see the second page of the abstract) the compound $(\text{H}_2\text{N})(\text{Me})(\text{Me})\text{C}-\text{C}(\text{O})-\text{O}-\text{CH}_2-\text{CN}$, and this compound teaches present amine compound of the *formula (3)*. In the present formula, present R^2 would be a hydrogen atom, b would be 2, present R^1 would be $(\text{Me})_2\text{C}-$, which is a branched alkylene group of 3 carbon atoms, present R^4 would be a straight alkylene group of 1 carbon atom, and a would be 1.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Jelinek (3,457,349).

With respect to present claim 1, in his claim 8, Jelinek teaches the compound, 1-aziridinepropionic acid ester, 2-cyanoethyl ester. The chemical structure of the compound is shown in claim 1 of Jelinek in which R is a cyanoethyl group. This compound teaches present amine compound of the *formula (4)*. In the present formula, present R^3 would be a straight alkylene group of 2 carbon atoms, present R^1 would be a straight alkylene group of 2 carbon atoms, and present R^4 would be a straight alkylene group of 2 carbon atoms.

With respect present claim 2, the claim language does not require the present amine compound to have the present formula (1) or (3). It only requires that *if* the amine compound of present claim 1 happens to be the compound of the formula (1) or (3), *then* the R^2 in those formulae (1) and (3) is required to have one of the formulae (5)-(8) listed in present claim 2. Therefore, Jelinek which teaches present amine compound of the *formula (4)* still teaches the present invention of claim 2.

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5. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Banasiak et al (Chem. Abstract 1987:156487 – English abstract for EP 209763).

Banasiak teaches the compound, 4-morpholineacetic acid, 2,6-dimethyl-, 2-cyanoethyl ester (see the second page of the abstract for the chemical structure). This compound teaches present amine compound of the formula (4). In the present formula, present R^3 would be branched alkylene group of 6 carbon atoms which contain an ether group, present R^1 would be a straight alkylene group of 1 carbon atom, and present R^4 would be a straight alkylene group of 2 carbon atoms.

With respect present claim 2, the claim language does not require the present amine compound to have the present formula (1) or (3). It only requires that *if* the amine compound of present claim 1 happens to be the compound of the formula (1) or (3), *then* the R^2 in those formulae (1) and (3) is required to have one of the formulae (5)-(8) listed in present claim 2. Therefore, Banasiak which teaches present amine compound of the *formula* (4) still teaches the present invention of claim 2.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanna et al (US 2001/0033993 A1).

Kanna et al teaches (see abstract) a positive working radiation sensitive composition, and Kanna et al furthermore teaches ([0124]) that it is preferred to use an organic basic compound for his composition. In [0128], after listing preferred examples for the organic basic compounds, either substituted or unsubstituted, Kanna teaches a cyano group as one of the fourteen examples for the *preferred substituent group*. It would have been obvious to one of ordinary skill in the art to choose any one of those substituted organic basic compounds listed in [0128], the substituent group being a cyano group, with a reasonable expectation of obtaining a positive working radiation sensitive composition excellent in the pitch dependency. Therefore, the prior art's teaching would render obvious present invention of claim 3.

Allowable Subject Matter

8. Claims 4-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the cited prior arts teaches or suggests the positive or negative resist composition of claim 6 or 8 which comprises the present amine compound of claim 1. Also, none of the cited prior arts teaches or suggest the resist composition of claim 4 which comprises any of the present amine compounds of the formulas (1)-(4).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is (703) 305-0504.

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The examiner can normally be reached on Monday-Friday from 8:30 am EST to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Janet Baxter, can be reached on (703) 308-2303. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9311 for after final responses or (703) 872-9310 for before final responses.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0661.

S. Lee

S. Lee
9/5/03



ROSEMARY ASHTON
PRIMARY EXAMINER